

6348

*my copy*

*Stabilization  
of material  
containing  
2 ppts*

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Joseph C. Vozella  
Acting Asst. Area manager  
Office of Environment and Projects  
Department of Energy  
Los Alamos Area Office  
Los Alamos, New Mexico 87544

Dear Mr. Vozella:

Your current approval to landfill polychlorinated biphenyls (PCBs) issued on June 5, 1980, has been reviewed by our office and is being reissued by this letter pursuant to Section (6)(e) of the Toxic Substances Control Act (TSCA). The approval of June 5, 1980, was granted after Los Alamos National Laboratory (LANL) demonstrated through design, geologic, and climatic information that it could safely landfill PCBs. After reviewing additional geologic and analytical information submitted by LANL on December 22, 1994, EPA has concluded that the continued disposal of PCBs at the Area G landfill will not pose an unreasonable risk of human health or the environment from PCBs. This approval adds certain conditions that were not a part of the original approval that are designed to ensure improved oversight of LANL PCB disposal operations. Also, a five-year expiration date has been added.

LANL shall be subject to the enclosed Conditions of Approval. Violation of 40 CFR Part 761, or any condition included as part of this approval, may subject LANL to enforcement action under TSCA and/or other applicable laws and regulations. Such action could result in a termination, revocation, or modification of the approval. Furthermore, receipt of evidence that: (1) a misrepresentation of any material fact has been in a LANL submittal; (2) all relevant facts have not been disclosed; (3) the nature of the disposal has substantially changed from the effective date of this approval; or, (4) the facility is found to be in non-compliance with its approval conditions (or a violation of requirements under 40 CFR Part 761 during PCB disposal), shall constitute sufficient cause for revocation or modification of the approval. This approval shall be effective on the date of this letter and shall expire at midnight on the same date as this letter, five years later.

6H-PT:SALES: 3/28/95

6H-PT                      6H-PN                      6H-P                      6H-P                      6H

GALLAGHER                      MELRICH                      MIXON                      HONKER                      GRE



*0474  
7A-54*

If you have questions, please call Mr. William K. Honker, Chief,  
RCRA Permits Branch, at (214) 655-6770.

Sincerely yours,

Allyn M. Davis, Director  
Hazardous Waste Management Division

Enclosure

cc: Mark Weidler  
New Mexico Environmental  
Improvement Division

① Storm water sample weirs ~~for~~ are not  
located near Pd 38. It would be better  
to require sampling of discharge points to  
North side of Pd 38

② Borehole location does not appear  
to be next to PCB chert →  
more info should be provided  
borehole location on latest figures

# LOS ALAMOS NATIONAL LABORATORY

## PCB LANDFILL APPROVAL CONDITIONS

### I. LOCATION OF FACILITY

- A. The PCB disposal area is located in Technical Area 54, Area G, of the Department of Energy's (DOE) Los Alamos National Laboratory, Los Alamos, New Mexico.
- B. Within Area G, PCBs are disposed in shafts and pits designated for PCB disposal.
- C. PCBs are stored in Technical Area 54, Area L.

### II. PCB DISPOSAL FACILITIES AUTHORIZED

#### A. PCB Pits and Shafts Authorized:

- 1. Pit 38 located in Technical Area 54, Area G; and,
- 2. The PCB Shaft Field located in Technical Area 54, Area G.

#### B. PCB Storage Areas Authorized:

- 1. PCB storage facility in Technical Area 54, Area L.

#### C. Authorization to Operate Additional Pits or Shafts:

LANL shall not commence disposal in a new PCB disposal pit or shaft until it has notified the EPA, Region 6, RCRA Permits Branch in writing and received written approval from EPA authorizing the new pit and/or shaft for PCB disposal.

*The EPA Region 6 RCRA Permits Branch has approved the expansion of the PCB Shaft Field located in Technical Area 54, Area G.*

#### D. Expansion of Existing Authorized Pits or Shafts:

Any pit or shaft authorized under condition II.A. of this section which LANL intends to expand shall require notification of the EPA, Region 6, RCRA Permits Branch, and prior written approval from EPA before any new PCBs may be disposed in the expanded facility.

E. New PCB Storage Areas:

PCBs shall not be stored in a new storage area, other than those authorized in condition II. B. above, without first notifying the EPA, Region 6, RCRA Permits Branch, and receiving prior written approval from EPA before PCBs may be stored in the new storage facility.

III. FACILITY DESIGN, CONSTRUCTION, AND OPERATION

A. General Design and Construction Requirements:

1. The PCB pit shall comply with 40 CFR 761.75 except for the provisions requiring a leachate collection system (761.75(b)(7)) and ground water monitoring wells (761.75(b)(6)(ii)). A waiver to these conditions is granted based upon EPA's review of the design of the pits and shafts and geology reports on the area which demonstrated that the existing ground water table is over 800 feet below the bottom of the pits and shafts, and that the arid conditions in the area make a leachate collection system unnecessary.

2. The PCB shafts shall comply with 40 CFR 761.75 except for the provisions requiring a leachate collection system (761.75(b)(7)) and ground water monitoring wells (761.75(b)(6)(ii)). A waiver to these conditions is granted based upon EPA's review of the geology of the area as summarized in condition A.1. above.

B. General Operating Requirements:

1. PCB wastes to be disposed in Pit 38 or in a disposal shaft shall be logged on the Waste Profile Request Form ES&H 10-3B, or its equivalent.

2. Disposal of PCB wastes shall comply with Administrative Requirements (AR) 10-2, 10-3, and 10-4 as they apply to PCB wastes.

C. PCB Pit and Shaft Operating Requirements:

1. PCB wastes to be disposed in Pit 38 shall be logged in LANL's waste tracking computer which shall include date of disposal, and type and quantity of waste disposed.

2. Large quantities of PCB contaminated soil and debris which are not containerized shall be transported in lined trucks with a covering sufficient to

prevent spillage or wind dispersion of the PCB contaminated material. Transport shall not occur after sunset or before sunrise.

D. PCB Shaft Operating Requirements:

1. PCB wastes disposed in a shaft shall have the date of disposal, type and quantity of waste disposed recorded in a log. This information shall be made available to EPA upon request.
2. Open shafts shall be covered to prevent accidental injury or the entrance of precipitation.
3. No PCB liquids or items containing PCB liquids shall be placed in a disposal shaft.

E. Storage Facility Area Requirements:

1. The PCB storage facility, located in Area L, shall comply with PCB storage requirements in 40 CFR 761.65.
2. PCBs shall be properly marked in accordance with 40 CFR 761.45.
3. All PCB items shall be logged showing date removed from service for disposal and the date the PCB item was sent from storage for disposal. This information shall be provided to EPA upon request.

F. Surface and Ground Water Monitoring Requirements:

1. Samples collected for compliance with this approval shall be analyzed for the parameters listed in 40 CFR 761.75(b)(6)(iii).
2. Samples analyzed for PCBs shall follow EPA approved procedures and methods. The procedures and methods used shall be recorded along with the data.
3. A sample of rainfall runoff from Area G shall be collected after each rainfall event when a sample of sufficient quantity for analysis can be obtained. Each sample collected shall be analyzed according to the requirements of III.F.1. and III.F.2. above. The sampling points at Area G shall be at the following locations (a map of this area is attached to these conditions):

- a. Storm water sampling weir for drainage from activity area Number 1;
- b. Storm water sampling weir for drainage from activity area Number 5; and,
- c. Storm water sampling weir for drainage from activity area Number 4.

4. Once annually, a sample shall be collected from the springs located on the west bank of the Rio Grande. These springs are designated Spring #3 and Spring #4 and are located at 35°49' north latitude, 106°11' west longitude; and 35°47' north latitude, 106°12' west longitude respectively. The samples shall be analyzed according to conditions III.F.1. and III.F.2. above.

#### **IV. CLOSURE AND POST CLOSURE**

A. Records required under 40 CFR 761.180 (d) and (f) shall be maintained for the times specified after the pits or shafts have been closed.

B. LANL shall notify the EPA, Region 6, RCRA Permits Branch in writing within 30-days of facility closure that an authorized pit or shaft under this approval is being closed.

#### **V. STANDARD APPROVAL CONDITIONS**

##### **A. Severability:**

The conditions of this authorization are severable, and if any provision of this authorization, or any application of any provision, is held invalid, the remainder of this authorization shall not be affected thereby.

##### **B. Duty to Comply:**

LANL shall comply with all Federal, State, and local regulations, approvals, and permits.

##### **C. Personnel Safety:**

LANL's personnel safety requirements and procedures for PCB handling, storage,

transport, and disposal shall comply with OSHA requirements.

**D. Duty to Mitigate:**

LANL shall correct any adverse impact on the environment resulting from noncompliance with this approval.

**E. Proper Operation and Maintenance:**

LANL shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed and used to achieve compliance with the conditions of this approval. Proper operation and maintenance include effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate Area G, and Area L quality assurance procedures.

All transport vehicles owned by LANL used for the transport of PCBs shall be properly maintained, inspected, and certified in writing by a responsible official of the company as meeting applicable safety standards under the Department of Transportation (DOT) regulations before PCBs are transported on public highways. Copies of all certifications shall be kept at the facility and shall be available for inspection on request.

**F. Duty to Provide Information:**

LANL shall furnish any relevant information which EPA may request to determine whether cause exists for modifying, revoking, reissuing, or terminating this approval, or to determine compliance with this approval. LANL shall also furnish, upon request, copies of records required to be kept under the TSCA PCB regulations.

**G. Inspection and Entry:**

LANL shall allow an authorized representative, upon presentation of credentials and other documents as may be required by law, to:

1. Enter the LANL facility where PCBs are being handled, stored, treated, or disposed;
2. Have access to and copy, at reasonable times, any records that must be kept under the TSCA PCB regulations;

3. Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations required under this approval or the TSCA PCB regulations; or,

4. Sample or monitor for the purpose of assuring that the LANL facility is operating in compliance with the conditions of the approval or the TSCA PCB regulations.

**H. Monitoring and Records:**

LANL shall comply with all monitoring and record keeping requirements for PCB landfills and storage facilities. All PCB records, documents, and reports shall be maintained at centralized locations at the LANL facility, and shall be made available for inspection by authorized EPA representatives. All records required by this approval shall be written in ink or typed. Any modification or correction of the records must be initialed and dated by the supervisor in charge.

**I. Notice of Transfer of Ownership:**

LANL shall notify EPA at least ninety (90) days before transferring ownership of the facility. LANL shall also submit to EPA at least ninety (90) days before such transfer a notarized affidavit signed by the transferee stating that the transferee shall abide by the terms of this approval.

**J. Twenty-four Hour Reporting of Noncompliance:**

If at any time LANL becomes aware of any departure from the TSCA PCB regulations, the approval, or the conditions of approval, LANL shall notify the RCRA Permits Branch, EPA, Region 6 by telephone within 24 hours, and shall submit a written report within five (5) days.

**K. Other Information:**

When LANL officials become aware that LANL has failed to submit any relevant facts in its application, or submitted incorrect information in any report to EPA, LANL shall promptly submit such facts or information to EPA, Region 6, RCRA Permits Branch.

**L. Operation of the Facility:**

LANL shall maintain an adequately trained onsite inspector to direct emergency procedures which could result from fires, explosions or releases of PCB containing wastes at the facility. LANL shall submit the name of this inspector within sixty (60) days of the effective date of this approval. LANL shall maintain in good working order any equipment required to deal with these emergencies.

**M. Spills:**

PCB spills occurring at the LANL facility, or from any LANL owned PCB transport vehicle, shall be cleaned up according to the PCB Spill Cleanup Policy, 40 CFR Part 761, Subpart G. PCB spills occurring outside PCB storage areas, or PCB feed staging areas, shall be reported within twenty-four (24) hours of the event to the RCRA Permits Branch, EPA, Region 6.

If spills cannot be cleaned up within twenty-four (24) hours, a LANL official shall notify the RCRA Permits Branch of the circumstance of the spill, the estimated time of cleanup, and a justification for the delay of the cleanup. The EPA may order cessation of PCB disposal at LANL if spills are not cleaned up to acceptable levels defined by EPA.

**N. Duty to Notify:**

LANL shall notify the RCRA Permits Branch, EPA, Region 6 in writing at least thirty (30) days prior to any planned physical or operational change that may require modification of this approval.

**O. Effective Date:**

The approval shall become effective on the date of the approval letter, and expire at midnight the same month and day after five years. LANL shall apply for a new approval at least one year before the expiration date. The approval request shall contain information which demonstrates that the facility complies with 40 CFR Part 761.

**END OF APPROVAL CONDITIONS**

# **FACT SHEET**

## **RE-ISSUANCE OF LOS ALAMOS PCB LANDFILL APPROVAL**

### **BACKGROUND**

-The Los Alamos PCB landfill approval is being reissued with an expiration date after five years. The new approval adds standard conditions, specifically authorizes individual facilities, and provides for more reporting of activities than the original approval.

-The new approval is being issued following a re-evaluation of the hydro-geology of the Area G disposal area where PCBs and other low-level radioactive wastes are disposed.

-Region 6 staff had requested an evaluation of Area G geology in 1992 in order to reevaluate the PCB landfill approval. Region 6 staff requested that:

- 1) it demonstrate through sampling and analysis that the surface soils and sediments at Area G had not been contaminated with PCBs;
- 2) it evaluate the potential for migration of PCBs downward through the volcanic tuff; and,
3. it address the potential for lateral migration through fractures in the tuff.

-The geology report was not delivered to EPA until the fall of 1994. The report did not adequately address the issues above. Region 6 staff visited LANL in November 1994 to restate what the geology report should address.

-LANL submitted the information on the three issues above in December 1994.

### **DISCUSSION OF LANL DATA**

-LANL submitted several enclosures to its submittal of December 22, 1994. Enclosure 3 addressed PCB migration at TA-54, Area G, and Enclosure 4 was a copy of a geology report on the "Los Alamos County Landfill Groundwater Monitoring Program..." which included some relevant modeling information on soils similar to Area G.

-LANL submitted supporting data on the above three issues, and concluded the following for each issue respectively:

**Issue #1: Has there been any evidence of PCB contamination of surface soils or sediments?**

LANL made the assumption that any significant discharge of PCB-contaminated liquids from transformers or capacitors would eventually exit the mesa walls and be deposited in soils and sediments at or below the discharge points. LANL collected 69 sediment samples along drainage channels off the mesa and in areas where there was evidence of sediment accumulation. No PCBs were detected in the 69 samples.

**Issue #2: Is there any evidence of PCB migration in the subsurface?**

A core hole was drilled in the summer of 1994 within 10 feet of the oldest PCB disposal shaft. The oldest shafts contained small and large capacitors with liquid PCBs inside. Eight core samples were taken at 10 foot intervals down to a depth of 80 feet. No PCBs were detected in the core samples.

**Issue #3: Is there any evidence that fractures in the Bandelier Tuff has or would become a conduit for lateral migration of PCBs?**

LANL conducted an experiment whereby 335,000 gallons of water was injected into the Bandelier Tuff. The tuff is unsaturated, and the large volume of water was shown to be redistributed by capillary forces. Saturation of the tuff resulted in a radial redistribution from the injection point into adjacent unsaturated rock. Based upon this experiment, and the modeling data provided in Enclosure 4 ("Los Alamos County Landfill Groundwater Monitoring Program..."), LANL concluded that the lateral movement of PCBs was unlikely in Area G.

#### **CONCLUSION/RECOMMENDATION**

-Based upon LANL's submittal, it is the conclusion of RCRA Permits staff that the re-issuance of LANL's PCB landfill approval will not result in endangerment of public health or the environment.